ployment of a vaccine which is a substance cultivated under conditions which will keep the microbe in a fixed state of virulence. The former is the method of Ferran; the latter is that of the author—the use of a modified virus. He gives two injections; the first is a mild form, and the second, after an interval of five days, is one whose virulence has been strengthened. The full effect of each is not attained until after five days have elapsed, so that the individual is not fully protected until ten days after the first inoculation. The microbe is cultivated under fixed and suitable conditions, and its virulence is known, so that it can be used with certainty and safety. One-twentieth of a culture-tube has been adopted as the standard dose. The amount of reaction is in direct proportion to the dose, and the amount of protection is in direct proportion to the intensity of the symptoms produced. A slight swelling and pain in the side are the usual local signs and there is a slight rise of temperature. He has made 70,000 injections upon 42,179 individuals without a single instance of mishap or accident. After giving statistics in detail, he concludes that in instances where cholera has made the largest number of victims, and when it has sufficiently spread so as to make it probable that the whole population were equally exposed, the result has been invariably favorable to inoculation. Applied during the existence of the epidemic, it tends to reduce the mortality even during the first ten days. The best method is probably to use doses of both vaccines, the second one being kept at the highest strength attainable. In support of his position, Koch is quoted as saying that the protective power of the method is established by the observations collected in India up to now, although further perfection and simplification may be possible. Treatment by antitoxin must be considered a decided success, but it cannot be used as a preventive treatment, as its effects on the system are very rapidly worn out. Neither the antidiphtheritic nor the anticholera serum lasts more than a few days. The treatment stands otherwise in regard to people already affected. His intention is to make use of antitoxic serum, and, in case it fails and there is danger of the patient succumbing before the antitoxin can take effect, its use can be combined with the transfusion of saline fluids. It is possible that the administration of antitoxic serum will mitigate the symptoms and diminish the active protection afforded by the vaccines.—*The Lancet,* 1895, No. 3773, p. 1555, and *British Medical Journal,* 1895, No. 1825, p. 1541.

NEW METHODS IN TREATMENT OF MALARIAL FEVERS IN INFANCY.

DR. MONCORVO has used phenocoll hydrochloride in doses of from five to thirty grains each twenty-four hours, generally administered in solution, in fifty-five cases. It has been generally well tolerated and has rendered good service in several cases where it is difficult or impossible to administer quinine, but it cannot be said to possess any advantages over quinine in pernicious fevers. In mild cases it is useful and safe, even when the kidneys are somewhat diseased. Asaprol has been easy of administration on account of its solubility, its slightly bitter taste being concealed by an aromatic syrup, as that of peppermint, and it does not give rise to any untoward symptoms. It can be used in dose from five to forty-five grains *per diem.* Eighteen cases are cited, and in but one case did it fail, and that was also tuberculous, and further complicated by severe broncho-pneumonia. In this case the fever resisted also antipyrin and quinine. In a child who suffered from malaria and chorea, both conditions were relieved by a daily dosage of seventy-five grains.—*Gazette hebdomadaire de Médecine et de Chirurgie*, 1895, No. 50, p. 590.

ANTITOXIN.

DR. WILLIAM HALLOCK PARK considers the objections with reference to the treatment of diphtheria, comparing the mortality at the Willard Parker Hospital for the month of January. In 1894 it was 39.6 per cent. (no antitoxin); 1895, 29.4 per cent. (very weak antitoxin, temperature of wards 80° to 85° F.); 1896, 19.4 per cent. (very strong antitoxin, temperature of wards, four days excepted, 70° to 75° F.). There were large numbers of cases of laryngeal diphtheria admitted during 1895, which, after removal of the tube, appeared for a time to be doing well, but later developed a subacute broncho-pneumonia. A larger proportion of patients, however, finally got well than in the previous year, in spite of the complication. In searching for the causes of the increased frequency of these complications, it was found that with a lowered temperature of the ward and by diminishing the overcrowding, the result was obtained that no broncho-pneumonia developed in any patient which was not present on admission. The conclusions at which the writer arrives are: 1. That with serum, strong in antitoxin, and with increased experience, we may hope to save many lives by its early use. 2. That until we can entirely eliminate the use of horse-serum we will observe occasional disagreeable after-effects, but these will be rarely, if ever, of a dangerous nature.—*The Medical News*, 1896, No. 1206, p. 213.

M. MONOD reports that the mortality during the first six months of 1895 from diphtheria in 108 cities of France having a population of over 20,000 has remarkably diminished, the average of the corresponding period of the seven preceding years being taken as a standard (2626 to 904). This decrease is attributed to the increasing use of antidiphtheritic serum.—*La Médecine Moderne*, 1895, No. 101, p. 783.

RHUS-POISONING.

MR. GEORGE M. BERINGER summarizes the various statements which have been made concerning this poison. It is pretty generally admitted that all parts of the plant are poisonous, and at all seasons of the year. The dust shaken from the roots can cause irritation whenever it comes in contact with the skin. As a preventive, washing the face and hands with a solution of hydrogen dioxide has given good results. Hot soda baths are efficacious in treatment, and locally the following lotion is preferred: Granular sodium sulphite, 1; glycerin, 4; camphor water to 32.—*American Journal of Pharmacy*, 1896, No. 1, p. 18.

[Pfaff has isolated the volatile substance known as toxicodendric acid, which has been held to be the active principle causing the eruption. He has found the real active principle to be a non-volatile, readily oxidizing oil which produces the characteristic effects of the poison.—R. W. W.]